DOCUMENT RESUME

ED 283 609 PS 016 647

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TITLE Measures of Social Cognitive Development: Interpersonal Conflict Resolution and Social Rule Understanding.
PUB DATE Apr 87
NOTE 15p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Baltimore, MD, April 23-26, 1987).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Children; *Cognitive Development; *Conflict Resolution; *Elementary School Students; Empathy; Interpersonal Competence; Interviews; *Peer Evaluation; *Social Cognition; Social Development; Sociometric Techniques; Test Reliability; *Test Validity
IDENTIFIERS *Social Rules; Vignettes

ABSTRACT

This study sought to validate two measures of social cognitive development: a measure of conflict resolution (Shantz and Shantz, 1982), and a social rule measure (Shantz, 1982). Participants were 214 kindergarten through fourth grade children from two suburban schools, one a public school and the other a Catholic parochial school in the Chicago area. Each child was individually presented with vignettes and then interviewed regarding the measures. The scoring categories for the interpersonal conflict measure were those devised by Shantz and Shantz: (1) forceful strategies, (2) simple conventions and directives, (3) reciprocal conventions, and (4) indirect strategies. Shantz's 10 original categories for ranking rule violation were modified to obtain adequate reliability. New categories were: (1) nominal-evaluative; (2) individual's preference; (3) legalistic; (4) peer reactions; (5) authority reactions; (6) negative physical and social effects to actor; (7) negative physical consequences to victim; (8) victim's emotional reaction; (9) social standards; (10) intrinsic social principles; (11) actor's emotional reaction; (12) individual's rights; and (13) alternative action. The results support the hypothesis that responses to these situations change over age. Older children are more likely to understand the limitations of conventions in the face of individual rights and preferences, and are more aware of intrinsic social principles and empathic responses. Finally, there is tentative support for a negative relationship between level of reasoning and peer rejection. (BN)

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Measures of Social Cognitive Development: Interpersonal Conflict Resolution and Social Rule Understanding

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PS 016647

Paper presented at the 1987 biennial meeting of the Society for Research in Child Development, Baltimore, Maryland, April, 1987.

Measures of Social Cognitive Development:
Interpersonal Conflict Resolution and Social Rule Understanding

Several measures of social cognitive development have been used in recent years to describe grade school children's social skills and social knowledge. Shantz and Shantz (1982), for example, used three measures of social cognitive functioning to predict conflict behavior in 1st and 2nd graders: social rule reasoning, conflict resolution reasoning, and person conception. The present study sought to further validate two of these three measures by testing a wider age range of children with a larger sample and then assessing their ability to predict sociometric status of the children.

The measure of interpersonal conflict resolution was adopted by Shantz and Shantz (1982) from Spivack and Shure (1974) and was designed to assess children's ability to generate alternative strategies for coping with difficult social situations. For example, one scenario describes a child whose best friend won't play with her anymore. The subject is asked what the child can do to get the friend to play with her again. Younger children were found to suggest fewer and less sophisticated alternatives to these vignettes than older children (Shantz & Shantz, 1982).

The social rule measure involved giving children five vignettes of rule violation: two rules were conventional (e.g., a child does not comb his hair, and a boy plays with dolls) and three rules were moral (e.g., a child hits another child, a child steals candy from another, and a child doesn't want to share). Following Damon (1977) and Turiel (1978), it was expected that different rationales for the acceptability of these behaviors would be given at different ages. Specifically, the bases of social conventions and moral rules

would not be perceived as different in the early grade school years, but older children would understand that moral rules cannot be broken with the impunity of conventional rules.

Shantz's (1982) description of social rule understanding, and Shantz and Shantz's (1982) study of conflict resolution and social rule understanding were both based upon the narrow age range of 1st and 2nd grade children. The present study expanded the age range to include kindergarten through 4th grade children in order to test the developmental hypothesis that social cognitive functioning becomes more sophisticated with age, a hypothesis untestable with the previous age range of one year. Also, we interviewed a larger sample: 71 kindergartners, 70 1st and 2nd graders, and 73 3rd and 4th graders. Shantz (1982) interviewed 48 children. Finally, we obtained ratings of peer acceptance for all children using the peer nomination method. We predicted that superior (developmentally more advanced) social-cognitive reasoning would be associated with more positive peer nominations, and immature reasoning would be associated with more negative peer nominations.

Method

Subjects. Children from two schools served as subjects for the present study. One school is a public school in the suburban Chicago area and includes children from middle and lower social class backgrounds (and about 15-20% of the students are from minority populations). The second school is a Catholic parochial school in the suburban Chicago area and includes children almost exclusively from a middle class background (and about 1-2% are minority population students). Permission requests were sent home to about 150 children in kindergarten through 4th grade at each of the two schools. Permission

was granted by the parents for about 2/3rds of the total sample. Thus, a total of 71 kindergarteners, 70 1st and 2nd graders, and 73 3rd and 4th graders participated in the study.

Procedure. Each child was interviewed separately by a trained experimenter. The child was read each vignette and then asked a series of open-ended questions designed to elicit a maximally informative answer. Experimenters were trained to create a friendly, supportive interview situation and to persist in a friendly manner in cases where the child failed to provide an adequate answer.

The peer sociometric measure was obtained by: 1) asking the child to "name three children in your classroom whom you like the most", 2) asking the child to "name three children in your classroom whom you like the least", and 3) having the child rate each classmate on a five-point scale (1 = "liked least" to 5 = "liked most"). The last method, although time-consuming, provides a more sensitive measure of sociometric standing than the peer nomination method because scores for every child are obtained from all of the interviewed children, and also because it is a more sensitive scale than simple liking or disliking (Asher & Hymel, 1981).

Stimulus vignettes and scoring categories. To make the present study as comparable as possible to the earlier work by Shantz, we adopted the stimulus vignettes that she used, and we also used the same set of questions to elicit responses from the children. We also intended to use the same scoring categories to code the responses.

The scoring categories for the interpersonal conflict stories were set up by Shantz and Shantz (1982) to be four developmental levels: 1) forceful

strategies requiring minimal knowledge about others' psychological functioning to execute (e.g., physical or verbal attack, adult intervention), 2) simple conventions and directives (e.g., say "please", give command), 3) reciprocal conventions that involve meeting another's needs (e.g., taking turns, sharing, trading), and 4) indirect strategies (e.g., tricking, inducing feelings, planning for the future). Our initial attempts to use this coding scheme on a subsample were successful--we obtained a between-rater reliability of 84.6% ((agreements - (extra codes + disagreements)/total codes)). Coding of all responses was then performed.

Shantz & Shantz (1982) used four levels of ranking rule violation responses as they did for interpersonal conflicts: 1) failure to consistently rate moral violations as more serious than convention violations, "he wanted to do that" justifications, or no justification, 2) failure to consistently rate moral violations as more serious, and reasoning that considered consequences for the actor and victim, 3) consistent rating of moral violations as more serious than convention violations, and reasoning that considered consequences for the actor, and 4) consistent rating of moral violations as more serious than convention violations, and reasoning emphasizing consequences to the victim or social standards/intrinsic principles. Our efforts to obtain adequate reliability with these four levels were not successful. After many attempts, we decided to go back to the ten categories used in the Shantz (1982) study that were used as a foundation for the four levels described above. The ten rule rationale categories for responses to the rule violation vignettes are:

1) Nominal-evaluative: Statement of rule being violated.
2) Individual's preference: Self-satisfying wish, preference, like or dislike.
3) Legalistic: Reference to the legality of behavior or procedural violations.
4) Peer reactions: Approval or disapproval of peers.
5) Authority reactions: Approval or disapproval of authority figures.
6) Negative physical effects to self: Negative physical consequences of action.
7) Negative physical consequences to victim: Physical or material well-being of victim in the story.
8) Victim's emotional reaction: Positive or negative emotional reaction.
9) Social standards: Normative statements of group consensus or standard.
10) Intrinsic social principle: Statement of violation of property rights, personal safety, and fairness principle.

Attempts to obtain adequate reliability with these ten categories were not immediately successful. After some revision of the categories, we obtained between-rater reliability of 80% (using the same formula as above). Category #6 was renamed "Negative physical and social effects to actor" to include instances where the actor might be avoided or disliked by the victim. Also, three other categories were added:

11) Actor's emotional reaction. Positive or negative emotional reactions to their own action.
12) Individual's rights. Understanding that individuals can act as they wish if they don't hurt others. Higher version of #2.
13) Alternative action. A prosocial alternative is suggested.

These changes were made in order to fully categorize all of the responses we encountered. This may have been necessary because our sample included a wider age range than did the Shantz study (kindergarten-4th grade vs. 1st-2nd grades); our subjects may have given us both more simple and more complex answers than the previous coding scheme could handle.

Results

Four categories are suggested by Shantz and Shantz (1982) in their as-

sessment of responses to the interpersonal conflict scenarios: 1) directives, 2) simple conventions, 3) reciprocal conventions and 4) indirect strategies. A hierarchical log-linear analysis was performed to determine the effects of grade upon the use of different categories. A fully saturated log-linear model, 3 X 4 X 4 (Grade by Category by Story), was examined. Significant main effects were found for all three factors. The Grade main effect, X^2 = 26.8, df = 2, $p < .0001$, confirmed, as expected, that older subjects suggested more alternatives than younger subjects (Kindergarten = 3.66, 1st/2nd = 4.07, and 3rd/4th = 5.58).

Another chief result was a significant Grade by Category interaction, X^2 = 16.5, df = 6, $p < .025$. The data show that the two highest ranked tactics showed a developmental trend, whereas the two lowest tactics were maintained at roughly the same level (see Table 1). Kindergartners chiefly suggested directives and simple conventions as solutions, but older children increasingly gave responses indicative of an awareness of the subtlety of social influence.

Insert Table 1 about here

Responses to the social rule violation vignettes also showed marked developmental trends. A similar hierarchical log-linear analysis was performed on a 3 X 2 X 13 (Grade by Story Type by Category) fully saturated model. The results were very similar to those for the interpersonal conflict stories. A main effect for Grade, X^2 = 41.2, df = 2, $p < .0001$, indicates that younger subjects provided fewer perspectives than older subjects (Kinder-

garten = 4.58, 1st/2nd = 5.16, 3rd/4th = 7.27.

A main effect for Story Type indicates that children gave responses of different categories to the two different kinds of stories: moral convention violations and moral rule violations, $X^2 = 91.7$, $df = 1$, $p < .0001$. An inspection of means in Tables 2 (Conventional rules) and 3 (Moral rules) shows that certain categories were used almost exclusively for one particular type of rules. For example, 98% of category #3, Legalistic reasons, was used for moral rules and only 2% of these answers were used for conventional rules. The categories chiefly used for conventional rules were: 2, 4, 9, and 12. And the categories chiefly used for moral rules were: 1, 3, 5, 7, 8, 10, 11, and 13. Thus, it is apparent that Shantz's categories were primarily designed to address one type of rule or the other. Only category 6 was fairly balanced between the two types.

The Grade by Category interaction, $X^2 = 64.5$, $df = 24$, $p < .0001$, summarizes a number of developmental trends (see Tables 2 and 3). For the conventional rule violations, increasing developmental trends were found for categories 1, 2, 4, 6, and 12. In short, older children are more concerned about individual's preferences and rights than younger children. A decreasing developmental trend was noted for category 5; older children seem to be less concerned about reactions from authority.

For moral rule violations, increasing developmental trends were found for categories 1, 3, 4, 6, 10, 11, and 13. In short, older children seem to be more concerned about legalistic principles, peer reactions, actor's emotional reactions (e.g., guilt), and alternative prosocial actions than younger children.

Insert Tables 2 & 3 about here

A series of multiple regressions were performed to provide a preliminary picture of which of these responding styles predicted sociometric standing best. Children who received more liking nominations from peers were less likely to use categories 1, 2, and 8, $R^2 = .14$, $F = 4.80$, $p < .005$. Initially we thought that these categories indicated a mature form of reasoning. However, category 8 did not yield greater numbers among the older children. Categories 1 and 2 do show a developmental increase with age. Shantz (1982) found that categories 2 and 8 were found to cluster together--she called it the "emotional" cluster--but she did not conclude that it was a more mature type of reasoning. Further analyses will be required to tease apart this puzzling finding.

Disliking nominations were predicted by three variables: 1) non-use of level #3 in interpersonal conflict reasoning, 2) non-use of level #4 in interpersonal conflict reasoning, and 3) use of category #9 in the rule violation categories, $R^2 = .21$, $F = 8.14$, $p < .0001$. This result is more readily interpretable. Levels 3 and 4 of the interpersonal conflict stories were found to increase developmentally. Thus, disliked individuals failed to reason at a high social-cognitive level. Category #9 from the rule violation rationales does not increase developmentally. Again, further analyses will hopefully elucidate why this category is involved with poor social-cognitive functioning.

Conclusions

The results of the present study, taken as a whole, support Shantz's (1982) belief that these responses to interpersonal conflict and rule violation situations change over age. Although she was not able to demonstrate this fact with her data since she only interviewed 1st and 2rd grade children, it seemed plausible, and in fact turns out to be correct, that younger children do not evidence some of the higher level reasoning skills assessed by these categories. Specifically, older children are more likely to think in terms of reciprocity (i.e., taking turns) and indirect strategies (i.e., inducing guilt) than younger children in situations of interpersonal conflict. Also, in cases of conventional rule violation, older children are more likely to understand the limitations of conventions in the face of individual's preferences and rights. In cases of moral rule violation, older children are more aware of intrinsic social principles (i.e., we should not hit another person because we do not want others hitting us) and empathic responses (i.e., feeling guilt about a misdeed and considering alternative prosocial actions). And finally, it seems that children who do not reason at the higher levels in the interpersonal conflict situations are rejected more by their peers. This last finding is tentative and requires substantiation with further planned analyses. Demonstration of the ability of these measures to assess developmental growth and to predict sociometric standing is important in order to support their validity for other research in social cognitive development. The present findings represent a good start in doing exactly this.

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Table 1

Categorized Responses to the Interpersonal Conflict Vignettes as a Function of Age of Subject

	Age of subject		
Category type	Kindergarten	1st/2nd grade	3rd/4th grade
#1 - Forceful strategies & adult interventions	66	59	75
#2 - Simple conventions & directives	102	110	124
#3 - Reciprocal conventions (e.g., taking turns)	44	56	91
#4 - Indirect strategies (e.g., tricking, inducing guilt)	37	60	84

Table 2

Categorized Responses to the Conventional Rule Violation Vignettes as a Function of Age of Subject

	Age of subject		
Category type	Kindergarten	1st/2nd grade	3rd/4th grade
#1 - Nominal-evaluative	27	28	37
#2 - Individual preferences	23	27	35
#3 - Legalistic	0	1	2
#4 - Peer reactions	17	17	25
#5 - Authority reactions	11	7	4
#6 - Neg. effects to actor	16	21	23
#7 - Neg. effects to victim	1	0	0
#8 - Victim's emot. reaction	1	1	0
#9 - Social standards	20	26	24
#10 - Intrinsic social prin.	2	0	0
#11 - Actor's emot. reaction	1	1	2
#12 - Individual's rights	1	1	16
#13 - Alternative action	0	0	0

Table 3

Categorized Responses to the Moral Rule Violation Vignettes as a Function of Age of Subject

	Age of subject		
Category type	Kindergarten	1st/2nd grade	3rd/4th grade
#1 - Nominal-evaluative	71	69	85
#2 - Individual preferences	8	3	9
#3 - Legalistic	34	42	51
#4 - Peer reactions	0	5	12
#5 - Authority reactions	22	20	24
#6 - Neg. effects to actor	8	13	13
#7 - Neg. effects to victim	18	24	21
#8 - Victim's emot. reaction	12	16	14
#9 - Social standards	0	4	3
#10 - Intrinsic social prin.	9	10	38
#11 - Actor's emot. reaction	5	3	13
#12 - Individual's rights	0	3	4
#13 - Alternative action	5	19	32